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EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/995,607

Applicant(s)

IWAI, SADAYUKI

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-30,32-60 and 63-80 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 71-77 and 80 is/are allowed.
- 6) ☒ Claim(s) 1-6,8-11,15,22,25-30,32-49,51,52,57-60,63-70,78 and 79 is/are rejected.
- 7) ☒ Claim(s) 12-14,16-21,23,24,50 and 53-56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

Upon reconsideration of the claims, the previous allowability of claims 8, 26, 27, 32-34, 38, 41, 45-48, and 57-60 is hereby withdrawn in view of the following rejections.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method selected from the group consisting of ink jet method, the toner jet method, the ion flow method, and the magnetography method must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Applicant argues that "the structural element that is positively claimed 'utilizes' an appropriate method or methods" is shown as Figure 1 as element 101. Examiner disagrees with this. The drawings must show every feature of the invention specified in the claims. Just reciting element 101 to cover an ink jet method, a toner jet method, ion flow method, and a magnetography method is erroneous. This is not supported by the specification. Element 101 only recites an image forming unit in the specification, page 9, lines 25.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Specification***

The disclosure is objected to because of the following informalities:

Arrows to indicate new paragraphs in the specification should be deleted from the specification, for example on pages 63-64.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-6, 8, 25-30, 32-49, 63, 64, 68-70, 78, and 79 are rejected under 35 U.S.C. 101 because each of the claims is directed to neither a "process" nor a "machine", but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. See explanations below in the rejection under 35 U.S.C. 112.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6, 8, 25-30, 32-49, 63, 64, 68-70, 78, and 79 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, line 2, "the image formation unit utilizes an electrophotography method" is indefinite because it is a claim which claims both an apparatus and the

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method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 8, lines 2-4, "the image forming unit utilizes one of an ink jet method, an ion flow method, and a magnetography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 25, lines 2-3, "the first and second transfer units utilizes a transfer belt method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II. In addition, "units utilizes" is grammatically incorrect.

As to claim 26, line 2, "the image forming unit utilizes a wet electrophotography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 44, lines 2-3, "the first and second transfer units utilizes a transfer belt method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II. In addition, "units utilizes" is grammatically incorrect.

As to claim 68, line 8, "the image forming unit utilizes an electrophotography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 68, line 13, "an intermediate transfer unit" is unclear as to why it is receiving the developed image **after** the images has been previously transferred using the first transfer unit and a second transfer unit (lines 3-4 of the same claim). How the intermediate transfer unit is related to the inverting unit is unclear?

As to claim 69, line 8, "the image forming unit utilizes an electrophotography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 70, lines 8-9, "the image forming unit utilizes one of an ink jet method, an ion flow method, and a magnetography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

As to claim 78, lines 11-12, "the first and second transfer units utilizes a transfer belt method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II. In addition, "units utilizes" is grammatically incorrect.

As to claim 79, line 8, "the image formation utilizes a wet electrophotography method" is indefinite as this is method language in an apparatus claim. It is indefinite because it is a claim that claims both an apparatus and the method steps of using the apparatus. *Ex parte Lyell*, 17 USPQ2d 1548. MPEP section 2173.05(p)II.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, 65, 67, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995) in view of Hamanaka et al. (Japan, 423).

Holzhauser discloses a copier with a photoconductor 32 that reads on the instant invention's image supporting member, a first transfer station 42, a second transfer station 44, and a turnover drum 50 that reads on the instant invention's inverting unit. When duplex copy sheets are to be formed, copy sheets CS are fed from the lower supply 43 to a position alongside the photoconductor between developing station 40 and the first image transfer station 42 so a developed image from one side of the document sheet is transferred to one side of the copy sheet. Then the copy sheet is transported with the photoconductor to a turnover drum 50 where the drum picks up the copy sheet and moves it initially in a counterclockwise direction as viewed in Fig. 1 until

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the trailing edge of the copy sheet is removed from the photoconductor. At the appropriate time in the cycle, the direction of the drum 50 is reversed to return the copy sheet to the photoconductor with the previously applied image then being on the upper side of the sheet (away from the photoconductor). Then the sheet is transported beneath the second transfer station 44 where a second developed image on the photoconductor is applied to the second side of the copy sheet. The copy sheet with the two images thereon then passes through a fusing station 52 which adheres the developed images to the copy sheet. Note column 4, lines 5-32. A document is scanned on a platen 22 with lamps 24. A charging station 36 charges the photoconductor to receive an image of a light pattern of the document page on platen 22. At an exposing station 38, the light pattern selectively discharges the electrostatic charge to form a latent image on the photoconductor. The photoconductor then passes through a developing station 40 where toner particles are applied to the latent electrostatic image to develop the image. Note column 3, line 21- column 4, line 4. When duplex document sheets S are provided in tray 14, it is necessary to copy both sides of the document sheets. The lamps 24 which read on the instant invention's "image reading device" in claim 67. The lamps 24 illuminate the document for coping, the document sheet is again fed around turnaround roller 28 and returned to the platen so that the second side of the document is fed through return path 26 back to the top of the stack of sheets. Note column 3, lines 21-50.

Holzhauser differs from the instant invention by not disclosing a branched nail and conveyance rollers as the inverting unit.



Hamanaka discloses an inversed triangular movable branching body 13 that reads on the instant invention's branched nail and rollers 11 and 12 that read on the instant invention's conveyance rollers. The movable branching body 13 is swayed between the upstream roller 11 and a downstream roller 12 using an axis 14 as a fulcrum so that a sheet discharging path (a), a guiding path (b), and reversal sheet discharging path (c) are provided centering the movable branching body 13. The branching body 13 is swayed when a solenoid 15 is turned on, the guiding path (b) is opened and the sheet discharging path (a) is closed, and a sheet R is guided to a double-face copying path. On the other hand when the solenoid 15 is turned off, the sheet-discharging path (a) is opened and the guiding path (b) is closed, thereby the sheet R is discharged to another path. It is also noted that a reciprocal roller 18 is used in this path. Note abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser with that of Hamanaka by replacing the turnover drum 50 with the movable branching body 13 and conveyance rollers of Hamanaka in order to reliably select the path of a sheet and effectively prevent jam from occurring when making double sided copies as disclosed by Hamanaka.

As to claim 52, "said image supporting member is formed in a drum-like shape", it would have been an obvious matter of design choice to have a drum-like shape instead of a belt shape image supporting member as disclosed by Holzhauser, since applicant has not disclosed that a drum-like shape image supporting member solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a belt shape image supporting member.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995), as modified by Hamanaka (Japan, 423), as applied to claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, 65, 67, and 69 above, and further in view of Sawano et al. (6,411,318) and Gauthier et al. (6,493,106).

Holzhauser, as modified by Hamanaka, differ from the instant invention by not disclosing an ink jet method, a toner jet method, an ion flow method, and a magnetography method.

Sawano et al. discloses printers such as electronic photographic, ink jet, toner jet, and ion flow printers are well know in the art to have similar types of processes. Note column 10, lines 43-47.

Gauthier et al. shows printers with ink jet engines, magnetographic engines, laser engines, ion deposition engines, LED engines, xerographic engines are similar and have the same units. Note column 2, line 60-column 3, line 10.

Sawano et al. and Gauthier et al. show that the copier of Holzhauser and the printers of Sawano et al. and Gauthier et al. are equivalent structures known in the art. Therefore, because these printers or copiers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute units from a copier with units from ink jet, toner jet, ion flow, and magnetographic printers because they are interchangeable.

Claims 26, 27, 32-34, 38, 41, and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995), as modified by Hamanaka (Japan,

423), as applied to claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, 65, 67, and 69, above, and further in view of Raj (5,710,958), Nakamura (Japan, 364), Nakashima et al. (6,308,034), and Mochizuki et al. (Japan, 448).

Holzhauser, as modified by Hamanaka, differ from the instant invention by not disclosing a wet electrophotography method; a liquid developing agent having a characteristic to be cured by an optical function; a liquid solvent in the developer is volatile; and liquid solvent of the developer is permeable to the recording medium.

Raj discloses an electrophotographic printing process that develops the latent image with developer that either a dry or liquid marking material having a carrier and toner. Note column 1, lines 10-20.

Nakamura shows toner used for liquid development is cured by ultraviolet rays, thus this improves the adhesiveness of the toner to a recording medium to be transferred. Note abstract.

Nakashima et al. discloses using in a wet type electrophotographic apparatus a liquid developer with a volatile solvent so that the removal rate of the solvent is increased. Note column 3, lines 57-59.

Mochizuki et al. discloses using a liquid developer with a carrier solvent that improves transferability of the toner itself and facilitates attachment and permeability to paper. Note abstract.

Raj shows the different developers, dry and liquid are equivalent structures known in the art. Therefore, because these developers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it

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obvious to substitute the dry developer of Holzhauser in view of Hamanaka with that of a liquid developer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser in view of Hamanaka and further in view of Raj and Nakamura so that the toner can be more adhesive to the recording medium to be transferred. This is discussed by Nakamura. Note abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser in view of Hamanaka and further in view of Raj, Nakashima et al., and Mochizuki et al. so that a volatile solvent can be used in the liquid developer to increase rate of removal of solvent or a solvent can be used in the liquid developer to facilitate attachment and permeability to paper in order to improve transferability of toner to the paper.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995), as modified by Hamanaka (Japan, 423), as applied to claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, 65, 67, and 69 above, and further in view Egbert et al. (5,788,382).

Holzhauser, as modified by Hamanaka, differ from the instant invention by not disclosing a cooling unit for cooling the image supporting member.

Egbert et al. discloses an imaging drum 10 for a printer 11 where an air intake passageway 104 extends from the first to the second end of the main body 101 of the drum 10. A fan assembly 170 is mounted in fluid transmitting relation relative to the air intake passageway 104. The fan assembly 170 urges a supply of ambient air through

the air intake passageway 104 and out of the plurality of apertures 105. This way the temperature of the surface 163 of the imaging drum 10 stays within a certain range.

Note column 5, lines 32-59 and column 7, lines 21-25, and lines 49-57.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser in view of Hamanaka with that of Egbert et al. so that a temperature on the surface of image supporter can be maintained, thus obtaining optimal copying.

Claims 58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995), as modified by Hamanaka (Japan, 423), as applied to claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, 65, 67, and 69 above, and further in view Tsusaka (6,050,732).

Holzhauser, as modified by Hamanaka, differ from the instant invention by not disclosing an interleaf mechanism.

Tsusaka discloses a double-sided printing apparatus 2 connected to a host computer 1. the printing apparatus 2 includes a printer unit 10 that is capable of performing an interleave printing procedure. The printing apparatus 2 has an external interface part 3 that provides an interface between the printing apparatus 2 and the host computer 1. A system control part 4 controls the entire printing apparatus 2, and has a image memory area for storing image data the amount of which corresponds to two pages. A user interface part 7 includes a control panel at which user's settings for the printer apparatus 2 are input to the system control part 4. Note column 3, lines 28-56. Interleaving printing means printing a front side of a first copy, the front side of a second

copy, the back side of the first copy, the back side of the second copy, etc., in this sequence. Thus, this reads on claim 60 where the front side of a second copy is printed reads on "a different image" in claim 60.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser in view of Hamanaka with that of Tsusaka so that when a paper jam occurs it is possible to safely recover the image data corresponding to the two pages by accessing the image memory areas during double-sided printing. Note Tsusaka, column 2, lines 55-59.

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995) in view of Tsusaka (6,050,732).

Holzhauser, as discussed above, differs from the instant invention by not disclosing a inverting an interleaf mechanism.

Tsusaka discloses a double-sided printing apparatus 2 connected to a host computer 1. the printing apparatus 2 includes a printer unit 10 that is capable of performing an interleave printing procedure. The printing apparatus 2 has an external interface part 3 that provides an interface between the printing apparatus 2 and the host computer 1. A system control part 4 controls the entire printing apparatus 2, and has a image memory area for storing image data the amount of which corresponds to two pages. A user interface part 7 includes a control panel at which user's settings for the printer apparatus 2 are input to the system control part 4. Note column 3, lines 28-56. Interleaving printing means printing a front side of a first copy, the front side of a second copy, the back side of the first copy, the back side of the second copy, etc., in this

sequence. Thus, this reads on claim 60 where the front side of a second copy is printed reads on "a different image" in claim 60.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser with that of Tsusaka so that when a paper jam occurs it is possible to safely recover the image data corresponding to the two pages by accessing the image memory areas during double-sided printing. Note Tsusaka, column 2, lines 55-59.

Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995) in view of Sawano et al. (6,411,318) and Gauthier et al. (6,493,106).

Holzhauser, as discussed above, differs from the instant invention by not disclosing an ink jet method, a toner jet method, an ion flow method, and a magnetography method.

Sawano et al. discloses printers such as electronic photographic, ink jet, toner jet, and ion flow printers are well known in the art to have similar types of processes. Note column 10, lines 43-47.

Gauthier et al. shows printers with ink jet engines, magnetographic engines, laser engines, ion deposition engines, LED engines, xerographic engines are similar and have the same units. Note column 2, line 60-column 3, line 10.

Sawano et al. and Gauthier et al. show that the copier of Holzhauser and the printers of Sawano et al. and Gauthier et al. are equivalent structures known in the art. Therefore, because these printers or copiers were art-recognized equivalents at the

time the invention was made, one of ordinary skill in the art would have found it obvious to substitute units from a copier with units from ink jet, toner jet, ion flow, and magnetographic printers because they are interchangeable as shown by Sawano et al. and Gauthier et al.

Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauser (4,593,995) in view of Raj (5,710,958) and Nakashima et al. (6,308,034).

Holzhauser differs from the instant invention by not disclosing a wet electrophotography method and a liquid solvent in the developer.

Raj discloses an electrophotographic printing process that develops the latent image with developer that either a dry or liquid marking material having a carrier and toner. Note column 1, lines 10-20.

Nakashima et al. discloses using in a wet type electrophotographic apparatus a liquid developer with a volatile solvent so that the removal rate of the solvent is increased. Note column 3, lines 57-59.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser with that of Raj because Raj shows the different developers, dry and liquid are equivalent structures known in the art. Therefore, because these developers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the dry developer of Holzhauser with that of a liquid developer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Holzhauser with that of Nakashima et al.



so that a volatile solvent can be used in the liquid developer to increase rate of removal of solvent as discussed by Nakashima et al..

***Allowable Subject Matter***

Claims 3-6, 25, 28-30, 35-37, 39, 40, 42-44, 49, and 63 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 68 and 78 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 12-14, 16-21, 23, 24, 50, and 53-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 71-77 and 80 are allowed over the prior art of record.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 4, 9-11, 15, 22, 51, 52, 59, and 62 have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sato (Japan, 467) discloses an electrostatic printing device. Murayama and Hirai et al. disclose art in cooling systems for image forming apparatuses.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-

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2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Susan S. Lee  
Primary Examiner  
Art Unit 2852

sl  
September 23, 2003